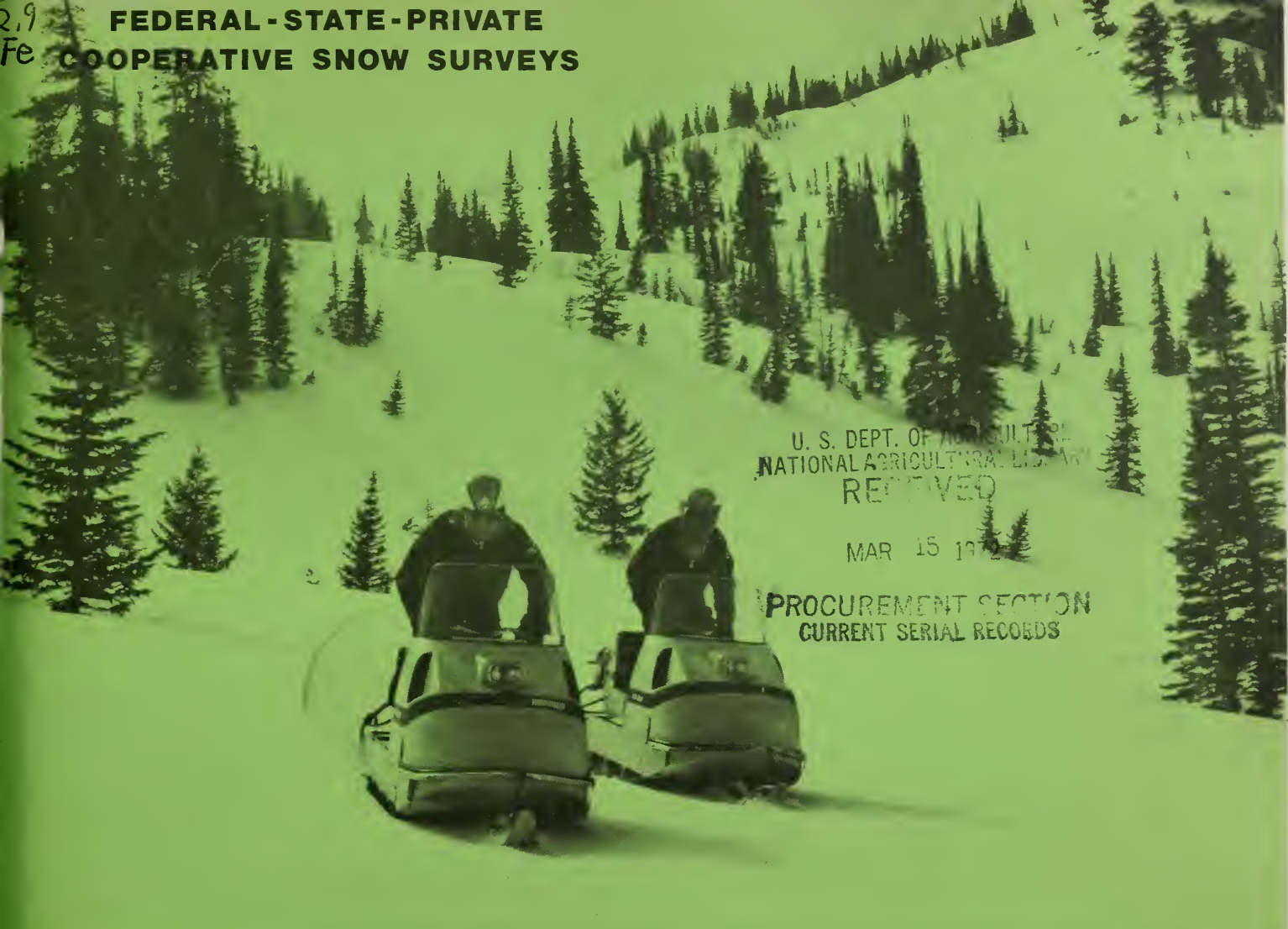


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WATER SUPPLY OUTLOOK FOR WASHINGTON

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Forest Service, U.S. Geological Survey, National Park Service, and other Federal, State and Private organizations.

AS OF
MAR. 1, 1972

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO NUMBER ORC 221-3

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR WASHINGTON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

|||||
Released by

ORLO W. KRAUTER

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

In Cooperation with

JOHN A. BIGGS

DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON
|||||

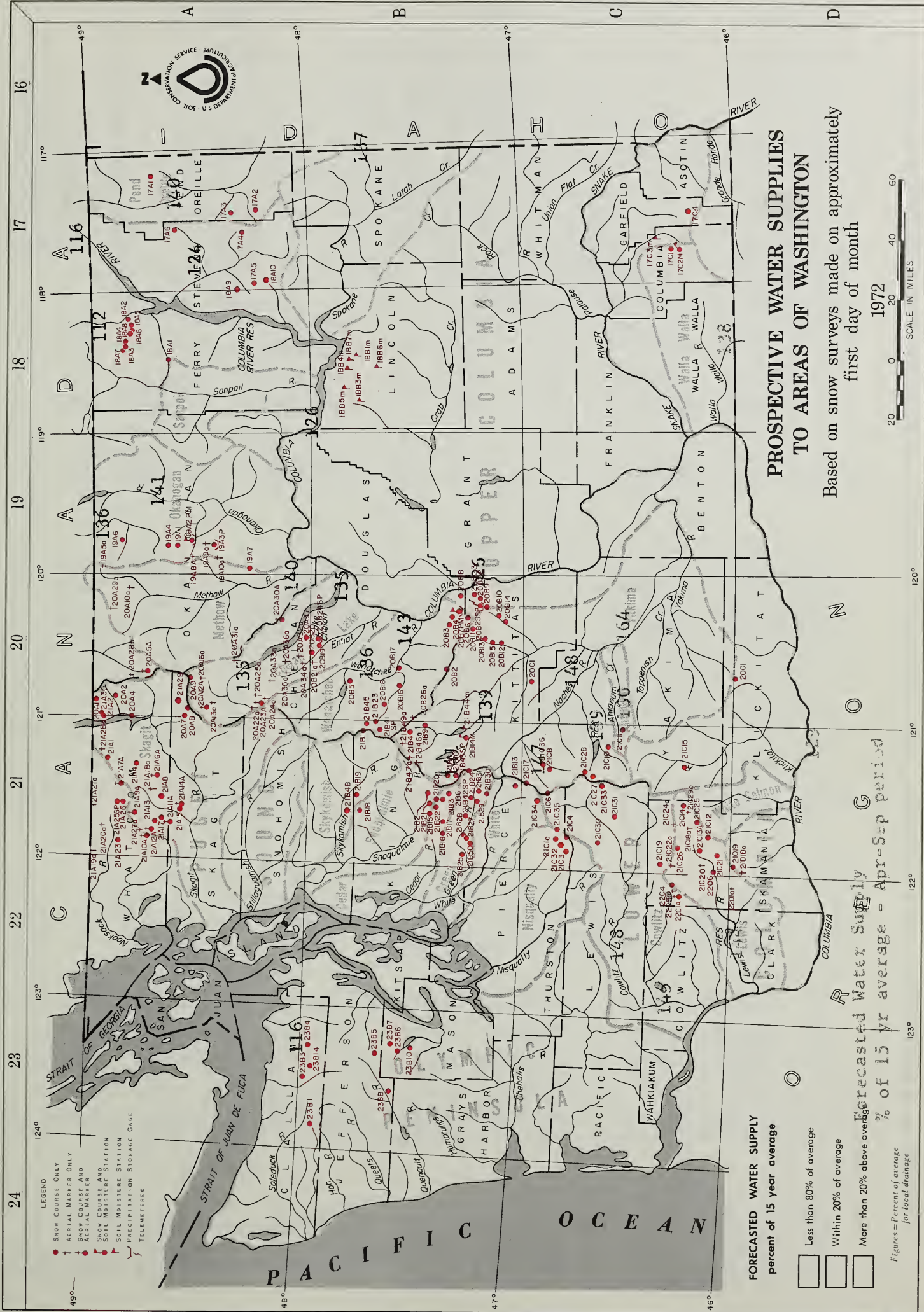
Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor

SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC. TWP.	RANGE	ELEV.	NAME	NUMBER	SEC. TWP.	RANGE	ELEV.	NAME	NUMBER	SEC. TWP.	RANGE	ELEV.					
UPPER COLUMBIA DRAINAGE																			
Pend Oreille River																			
Boyer Mountain	17A2	7	31N	43E	5250	Colockum Creek									Lewis River (continued)				
Bunchgrass Meadow	17A1	24	37N	44E	5000	Colockum Creek Upper	20B22	11	20N	20E	5300	Divide Meadow	21C29a	21	8N	10E	5600		
Winchester Creek	17A3	30	33N	43E	2970	Colockum Creek Lower	20B23	1	20N	20E	4300	Grand Meadow	21C25	28	9N	9E	3500		
Kettle River																			
Boulder Road	18A2	36	39N	36E	1450	Squilehuck Creek									Skagit River				
Butte Creek	18A3	28	39N	35E	4070	8eehive Springs	20B3	12	21N	19E	4400	Lone Pine Shelter	21C26	8	9N	7E	3800		
Cabin Creek	18A8	5	38N	36E	3170	Scout-A-Vista	20B4	18	21N	20E	3400	Marble Mountain	22C5a	24	8N	5E	3200		
Goat Creek	18A4	26	39N	35E	3595	Stemilt Creek									Devils Park				
Snow Caps Creek	18A5	3	38N	36E	2150	Jump-Off	20B8	34	21N	20E	4450	Oldman Pass	22C6	36	8N	6E	2000		
Snow Caps Trail	18A6	5	38N	36E	2720	Stemilt Slide	20B6	30	21N	20E	5000	Plains of Abraham	22C1a	35	9N	5E	4400		
Summit G. S.	18A7	20	39N	35E	4600	Upper Wheeler	20B7PM	30	21N	20E	4400	Smith Creek Road	22C2a	29	9N	6E	2100		
Colville River																			
Baird	17A6	19	36N	42E	3215	Crob Creek									Lake Hozomeen				
Carlson	18A9	34	32N	38E	2885	Creston-Kunz	18B1m	32	27N	34E	2440	Spencer Meadow	21C20a	16	8N	7E	3400		
Chewelish	17A4	11	32N	41E	4925	Jack Woods	18B3m	28	27N	31E	2750	Surprise Lakes	21C13a	14	7N	8E	4250		
Stranger Mountain	17A5	26	31N	38E	4990	Krause	18B4m	21	27N	33E	2420	Table Mountain	21C24a	20	9N	9E	4200		
Togo	18A10	6	29N	38E	3370	Sheffels	18B5m	17	27N	32E	2378	Timbered Peak	21D18a	36	6N	6E	3000		
Sanpoil River																			
Sherman Creek Pass	18A1	19	36N	35E	5350	Sherman	18B7m	24	25N	32E	2290	Cowlitz River							
Okonogan River																			
Clark	19A8a	2	36N	23E	7000	Wheatridge	18B8m	24	25N	32E	2290	Cayuse Pass	21C6	15	16N	10E	5300		
Muckamuck	19A9a	20	36N	24E	6750	Yokima River									Mosquito Meadows				
Mutton Creek No. 1	19A1	30	37N	24E	5700	Ahtanum R. S.	21C11	26	12N	14E	3100	Ohanapecosh	21C19	33	10N	7E	4100		
Mutton Creek No. 2	19A4	19	37N	24E	6000	Big Boulder Creek	21B9	35	23N	14E	3200	Packwood Lake	21C32	28	15N	10E	2200		
Paydayten	20A28a	32	40N	18E	4300	Bumping Lake	21C8	23	16N	12E	3450	Pigtail Peak	21C31	21	13N	10E	2870		
Rusty Creek	19A3P	18	35N	24E	4000	Bumping Lake New	21C56	34	24N	14E	3371	Potato Hill	21C33	11	13N	11E	5900		
Salmon Meadows	19A3P	18	35N	24E	4000	Colockum Pass	20B9	25	20N	20E	5370	Willame Creek	21C14	36	10N	10E	4500		
Starvation Mtn.	19A2PM	33	37N	24E	4500	Cooke Creek	20B10	17	19N	20E	4123	S. F. Thunders Creek	21A12a	20	37N	8E	5100		
Stout Coulee	19A10a	15	35N	23E	6750	Domery Flat	21B44m	15	20N	14E	2200	Schreibers Meadow	21A10a	18	37N	8E	3400		
Tours Coulee	19A6	30	39N	25E	2845	Fish Lake	21C10	3	12N	13E	6000	S. F. Thunders Creek	21A14a	20	36N	9E	2200		
Methow River																			
Billy Goat Pass	20A10a	10	38N	20E	6400	Green Lake	21C10	3	12N	13E	6000	Sulphur Creek	21A13	22	37N	8E	1600		
Dollar Watch	20A29a	8	39N	20E	7000	Grouse Camp	20B11	29	21N	19E	5385	Three Mile Creek	21A15	18	36N	9E	1600		
Harts Pass	20A5a	7	37N	18E	6500	High Creek	20B12	34	20N	19E	2930	Watson Lakes	21A18	25	37N	9E	4500		
Horseshoe Basin	19A5a	15	40N	23E	7000	Joe Lake	21B46a	22	23N	12E	4624	Nookstock River							
Loup Loop	19A7	36	34N	23E	4650	Lake Cle Elum	21B14m	15	20N	14E	2200	Bald Mountain	21A19a	7	40N	7E	4400		
Chelan Lake Basin																			
Cloudy Pass	20A22a	12	31N	15E	6500	Lemah Creek	21B47a	7	23N	13E	3327	Canyon	21A20a	20	40N	8E	5100		
Greenwood Flat	20A25a	3	31N	16E	3540	Namastash	20C1	24	17N	16E	3935	Glacier Creek	21A23	9-10	38N	7E	3700		
Little Meadows	20A24a	8	31N	16E	5275	Norse Lake	21C17	6	16N	11E	3400	Panorama New	21A26	17	35N	9E	4300		
Lynn Lake	20A23a	18	31N	16E	5900	Trail Creek	20B13	4	20N	19E	3875	Panorama Snow Pillow	21A25SP	17	35N	9E	4300		
Park Creek Flat	20A13a	18	34N	16E	2220	Tunnel Avenue	20B14	20	19N	20E	3360	Twin Lakes	21A21a	16	40N	9E	5200		
Park Creek Ridge	20A12a	7	34N	16E	4600	Van Epps Pass	20B26a	16	23N	15E	5925	OLYMPIC PENINSULA							
Petersons	20A16a	3	34N	17E	3730	Walters Flat	20B15	22	20N	19E	3360	Dungeness River							
Rainy Pass	20A9	21	35N	17E	4780	Wapitus Lake	21B49a	12	23N	13E	3024	Deer Park	23B4	1	28N	5W	5200		
Safety Harbor	20A30a	32	31N	20E	6300	White Pass (East Side)	21C28	2	13N	11E	4500	Morse Creek							
War Creek Pass	20A31a	34	33N	18E	6500	White Pass (Leach Lake)	21C27	1	13N	11E	4500	Cox Valley	23B14	29	28N	6W			
Entiat River																			
Brief	20B19	34	28N	19E	1600	Asotin Creek									Elwha River				
Entiat Meadows	20A33a	28	31N	17E	4800	Spruce Springs	17C4	9	8N	40E	5700	Hurricane	23B3	36	29N	7W	4500		
Entiat River Trail	20A34a	2	29N	17E	3150	Mill Creek									Skokomish River				
Fox Camp	20A36a	17	30N	18E	6510	Couse	17C5m	2	9N	35E	3370	Black and White	23B7	17	24N	5W	4200		
Pope Ridge	20B20	22	29N	18E	4300	Homestead	17C1	11	9N	40E	4030	Black and White Lakes	23B6	16	24N	5W	4700		
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	4300	Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400	Four Stream	23B10	1	23N	6W	3000		
Pugh Ridge	20A32a	34	30N	18E	6400	Klickitat River									Soleduck River				
Shady Pass	20A37	20	30N	19E	6200	Satus Pass	20D1	21	6N	17E	4030	Deer Lake	23B1	14	28N	9W	3900		
Snow Brushy	20A35a	21	30N	17E	3850	West Fork Cabin	21C15	23	9N	12E	3000	LEGEND							
Tommy Creek	20B21a	10	28N	18E	5300	White Salmon River													
Wenatchee River																			
Berne-Mill Creek	21B23	7	26N	15E	2925	Cultus Creek	21C12	35	7N	8E	4000	NUMBERING SYSTEM EXAMPLE							
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240	Lewis River									21A7 SNOW COURSE ONLY				
Blewett Pass No. 2	20B2	35	22N	17E	4270	Blue Lake	21C22a	19	9N	8E	4800	21A7A SNOW COURSE AND AERIAL MARKER							
Chiwaukum G. S.	20B16	4	25N	17E	1810	Bob's Trail	21C21	25	8N	7E	2200	21A7B SNOW COURSE AND AERIAL MARKER							
Lake Wenatchee	20B17	1	24N	17E	1127	Calamity Ridge	22D1a	8	5N	5E	2500	21A7C SNOW COURSE AND AERIAL MARKER							
Leavenworth R. S.	20B18	4	26N	16E	2140	Council Pass	21C18a	24	9N	9E	4200	21A7P SNOW COURSE AND PRECIPITATION STORAGE GAGE							
Merritt	21B1	14	26N	13E	4070	Stevens Pass									21A7SP SNOW PILLAR				
Stevens Pass	21B45	12	26N	19E	3700	Trough #2													
Stevens Pass Sand Shed	20B25SP	10	20N	20E	5310														
Trough #2																			



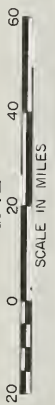
FORECASTED WATER SUPPLY
percent of 15 year average

- Less than 80% of average
- Within 20% of average
- More than 20% above average

PROSPECTIVE WATER SUPPLIES TO AREAS OF WASHINGTON

Based on snow surveys made on approximately
first day of month

1972



Forecasted Water Supply
% of 15 yr average - Apr-Sep period

Figures = Percent of average
for local drainage

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

UPPER COLUMBIA DRAINAGE																	LOWER COLUMBIA DRAINAGE																	PUGET SOUND DRAINAGE																	OLYMPIC PENINSULA																																																																												
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.																																																																																																		
Pend Oreille River																																Asotin Creek																																Lewis River (continued)																																Dungeness River																															
Boyer Mountain	17A2	7	31N	43E	5250	Colockum Creek Upper	20B22	11	20N	20E	5300	Colockum Creek Lower	20B23	1	20N	20E	4300	Colockum Creek	21C29a	21	9N	10E	5600	Beaver Creek Trail	21A4	35	39N	12E	2200	Skagit River	21A1	9	39N	12E	3680																																																																																												
Bunchgrass Meadow	17A1	24	37N	44E	5000	Squilchuck Creek	20B3	12	21N	19E	4400	Scout-A-Vista	20B4	18	21N	20E	3400	Colockum Creek	20B23	1	20N	20E	4300	Beaver Pass	21A1	26	40N	12E	6000	Devils Park	20A4	34	38N	16E	5900																																																																																												
Winchester Creek	17A3	30	33N	43E	2970	Beehive Springs	20B3	12	21N	19E	4400	Scout-A-Vista	20B4	18	21N	20E	3400	Squilchuck Creek	20B3	12	21N	19E	4400	Brown Top	21A28a	26	40N	12E	6000	Freecout Creek Trail	20A1	14	40N	14E	3500																																																																																												
Kettle River																																Mill Creek																																Freecout Meadows																																Elwha River																															
Boulder Road	18A2	36	39N	36E	1450	Spruce Springs	17C4	9	8N	40E	5700	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B8	34	21N	20E	4450	Oldman Pass	21A29	25	40N	14E	3500	Granite Creek	21A2	19	40N	14E	2600																																																																																												
Butte Creek	18A3	28	39N	35E	4070	Couse	17C3m	2	9N	35E	3370	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Plains of Abraham	21A29	25	40N	14E	3500	Lake Hazomeen	21A2	19	40N	14E	2600																																																																																												
Cabin Creek	18A8	5	38N	36E	3170	Homestead	17C1	11	9N	40E	4030	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Smith Creek Road	21A2	19	40N	14E	2600	Lake Hazomeen	21A2	19	40N	14E	2600																																																																																												
Goat Creek	18A4	26	39N	35E	3595	Martin Springs (Helmers SW)	17C2M	23	9N	40E	4400	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Spencer Meadow	21A2	19	40N	14E	2600	Meadows Cabins	20A8	29	36N	14E	1900																																																																																												
Snow Caps Creek	18A5	3	38N	36E	2150	Martin Springs (Helmers SW)	17C2M	23	9N	40E	4400	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Surprise Lakes	21A30	19	40N	14E	2800	New Hazomeen Lake	21A30	19	40N	14E	2800																																																																																												
Snow Caps Trail	18A6	5	38N	36E	2720	Homestead	17C1	11	9N	40E	4030	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Table Mountain	21A30	19	40N	14E	2800	Thunder Basin	20A7	15	35N	14E	4200																																																																																												
Summit G. S.	18A7	20	39N	35E	4600	Martin Springs (Helmers SW)	17C2M	23	9N	40E	4400	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Timbered Peak	21A30	19	40N	14E	2800																																																																																																		
Colville River																																Klickitat River																																Cowlitz River																																Nooksack River																															
Baird	17A6	19	36N	42E	3215	Satus Pass	20D1	21	6N	17E	4030	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Jack Woods	18B1m	32	27N	34E	2440	Baker Pass	21A27a	1	37N	7E	4900																																																																																												
Carlson	18A9	34	32N	38E	2885	West Fork Cabin	21C15	23	9N	12E	3000	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Krause	18B3m	28	27N	31E	2750	Dock Butte	21A27a	1	37N	7E	4900																																																																																												
Chewelah	17A4	11	32N	41E	4925	Cultus Creek	21C12	35	7N	8E	4000	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Sheffels	18B5m	17	27N	32E	2378	Easy Pass	21A7A	19	39N	11E	5200																																																																																												
Stranger Mountain	17A5	26	31N	38E	4990	Lewis River	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Sherman	18B7m	24	27N	33E	2440	Jasper Pass	21A6A	17	38N	11E	5400																																																																																												
Togo	18A10	6	29N	38E	3370	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Wheatridge	18B6m	24	25N	32E	2290	Komo Kulshan	21A17	31	37N	9E	800																																																																																												
Sanpoil River																																White Salmon River																																Methow River																																Schreibers Meadow																															
Sherman Creek Pass	18A1	19	36N	35E	5350	Bob's Trail	21C21	25	8N	7E	2200	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	S. F. Thunder Creek	21A10A	18	37N	8E	3400																																																																																												
Okanogan River																																Lewis River																																Methow River																																Sulphur Creek																															
Clark	19A8a	2	36N	23E	7000	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Big Boulder Creek	21C18	23	16N	12E	3450	Three Mile Creek	21A15	18	36N	9E	1600																																																																																												
Muckamuck	19A9a	20	36N	24E	6750	Bob's Trail	21C21	25	8N	7E	2200	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Bumping Lake	21C8	23	16N	12E	3450	Watson Lakes	21A8	25	37N	9E	4500																																																																																												
Mutton Creek No. 1	19A1	30	37N	24E	5700	Council Pass	21C18a	24	9N	9E	4200	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Bumping Lake New	21C36	13	16N	12E	3400	Bald Mountain	21A19a	7	40N	7E	4400																																																																																												
Mutton Creek No. 2	19A4	19	37N	24E	6000	Council Pass	21C18a	24	9N	9E	4200	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Bumping Lake New	21C36	13	16N	12E	3400	Canyon	21A20A	20	40N	8E	5100																																																																																												
Paysayten	20A28a	32	40N	18E	4300	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Bumping Lake New	21C36	13	16N	12E	3400	Glacier Creek	21A23	9-10	38N	7E	3700																																																																																												
Rusty Creek	19A3P	18	35N	24E	4000	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Bumping Lake New	21C36	13	16N	12E	3400	Panorama New	21A26	17	39N	11E	5400																																																																																												
Salmon Meadows	19A2PM	33	37N	24E	4500	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Bumping Lake New	21C36	13	16N	12E	3400	Panorama Snow Pillow	21A25P	17	39N	9E	4300																																																																																												
Starvation Mtn.	19A10a	15	35N	23E	6750	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Bumping Lake New	21C36	13	16N	12E	3400	Twin Lakes	21A21a	16	40N	9E	5200																																																																																												
Touts Coulee	19A6	30	39N	25E	2845	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Bumping Lake New	21C36	13	16N	12E	3400																																																																																																		
Methow River																																White Salmon River																																Nisqually River																																White River																															
Billy Goat Pass	20A10a	10	38N	20E	6400	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Ghost Forest	21C4	23	15N	8E	4550																																																																																												
Dollar Watch	20A29a	8	39N	20E	7000	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Longmire	21C3	29	15N	8E	2760																																																																																												
Harts Pass	20A5A	7	37N	18E	6500	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Paradise Park (New)	21C35	13	15N	8E	5050																																																																																												
Horseshoe Basin	19A5a	15	40N	23E	7000	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Stem Glade	21C1	13	15N	8E	5050																																																																																												
Loup Loup	19A7	36	34N	23E	4650	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100																																																																																																		
Chelon Lake Basin																																White Salmon River																																Nisqually River																																White River																															
Cloudy Pass	20A22a	12	31N	15E	6500	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Corral Pass	21B13	30	18N	11E	6000																																																																																												
Greenwood Flat	20A25a	3	31N	16E	3540	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	White River Campground	21C34	4	16N	9E																																																																																													
Little Meadows	20A24a	8	31N	16E	5275	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Green River	21B24	18	20N	11E	1800																																																																																												
Lyman Lake	20A23a	18	31N	16E	5900	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Charley Creek	21B25	27	21N	9E	1200																																																																																												
Park Creek Flat	20A13a	7	34N	16E	2220	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Cougar Mountain	21B42SP	21	21N	9E	3200																																																																																												
Park Creek Ridge	20A12a	7	34N	16E	4600	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Grass Mountain No. 2	21B27	14	20N	8E	2900																																																																																												
Petersons	20A16a	3	34N	17E	3730	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Grass Mountain No. 3	21B28	12	20N	8E	2100																																																																																												
Rainy Pass	20A9	21	35N	17E	4780	Blue Lake	21C22a	19	9N	8E	4800	Scout-A-Vista	20B4	18	21N	20E	3400	Stemilt Creek	20B6	30	21N	20E	5000	Ahtanum R. S.	21C11	26	12N	14E	3100	Lester Creek	21B29	36	20N	10E																																																																																													

WATER SUPPLY OUTLOOK

State of Washington
March 1, 1972

* Record or near record streamflows are forecasted for the State *
* of Washington and tributary streams during the 1972 runoff *
* period. Flows are anticipated to reach volumes which were *
* only exceeded one or two times, in most cases, in the history *
* of the river gaging record. Even the flow at The Dalles, Ore- *
* gon, is forecasted to be exceeded only by the giant flows *
* which occurred in 1894. Of course, these flows are based on *
* the fact that normal conditions will exist throughout the to- *
* tal runoff season. Drying winds could reduce the snowpacks *
* immensely and reduce the resultant runoff while a wet spring *
* together with above-normal temperatures could result in peak *
* flows in excess of anything seen. The snowpacks are well a- *
* bove normal with only one drainage in the total State of Wash- *
* ington indicating normal snowpacks and this watershed has a *
* short record of snow courses. The range of snow cover is *
* from normal on the Colville River to a high of 116% greater *
* than normal on the Nisqually. Much of this snowcover can be *
* found at the lower elevations which normally tends to come off *
* early in the season thereby sustaining streamflows from early *
* runoff through the summer months. This low-elevation snowpack *
* has a tendency to flash off early causing much local damage. *
* Many of these snow courses were measured late in March and a *
* few were not obtained at all. This was the result of the heavy *
* storm period that existed over the mountains during the latter *
* part of February and the first week of March. These storms *
* put down a great deal of snow at higher elevations and rain at *
* the valley stations. If this condition continues throughout *
* the rest of March many streams will go out of their banks *
* early in the runoff season and stay high throughout the runoff *
* period. *
*
* Precipitation has been above normal throughout the winter sea- *
* son at all valley stations with the exception of the northeast *
* section of Washington. This above-normal precipitation con- *
* tinues with February reporting as high as 126% greater than *
* normal rainfall in the central area. *
*
* The reservoir storage has little meaning in a high-water situ- *
* ation that is in existence now because reservoir managers are *
* attempting to lower their reservoirs for flood control purpos- *
* es yet maintain flows below the reservoirs at flood stage or *
* lower. For example, the Yakima drainage has high reservoir *
* storage as of March 1 but these reservoirs cannot now be *
* brought down due to the high uncontrolled inflow below the *
* reservoirs. *
*
* Flows during the month were generally above normal with only *
* the Columbia at Birchbank and the Similkameen near Nighthawk *
* reporting below normal runoffs. *

SNOW COVER

As stated above, the Colville watershed has a snowpack that is less than was measured the last two years and exactly normal. The Kettle River to the north, also, has a snowpack that is low in comparison to others in the state but its snow cover is 26% greater than normal. The range of snow cover for the Upper Columbia basin in Washington varies from this normal previously mentioned to 110% greater than normal for the Wenatchee River. The range on the Lower Columbia is from 85% above normal on the Lewis River to 98% above on the Klickitat. The Puget Sound drainage varies from 63% above normal on the Green River to a 116% greater for the Nisqually. On the Olympic Peninsula the range is from 36% above normal to 54% above.

RESERVOIRS

Only Franklin D. Roosevelt Lake, Chelan, and Ross Reservoir have less than normal amounts of water in storage as of March 1. All other reservoirs have more water in storage and one, Coeur d'Alene Lake, has greater than its capacity as of March 1. This is a result of the restricted outflow of Coeur d'Alene Lake.

PRECIPITATION

During the month of February the National Weather Service reported precipitation in the Columbia portion of Canada to be 56% greater than normal; 55% greater on the Pend Oreille-Spokane; 34% less in the northeastern area; 50% greater in the southeast; 126% greater in the central; 81% greater in the northcentral; and on the northwest slopes of the Cascades 90% greater. The southwest slopes of the Cascades had rainfall that was 55% greater than normal. These February precipitation figures are similar to the seasonal total from November through February only not as dramatic, percentagewise.

SOIL MOISTURE

The two soil moisture stations in the Yakima drainage are not measured due to the continued inoperation of the soil moisture meter. The other stations in the state report the soil to be wetted similar to what occurred during the last two years. Some stations have reported more moisture and some less but a similar situation on the average.

STREAMFLOW

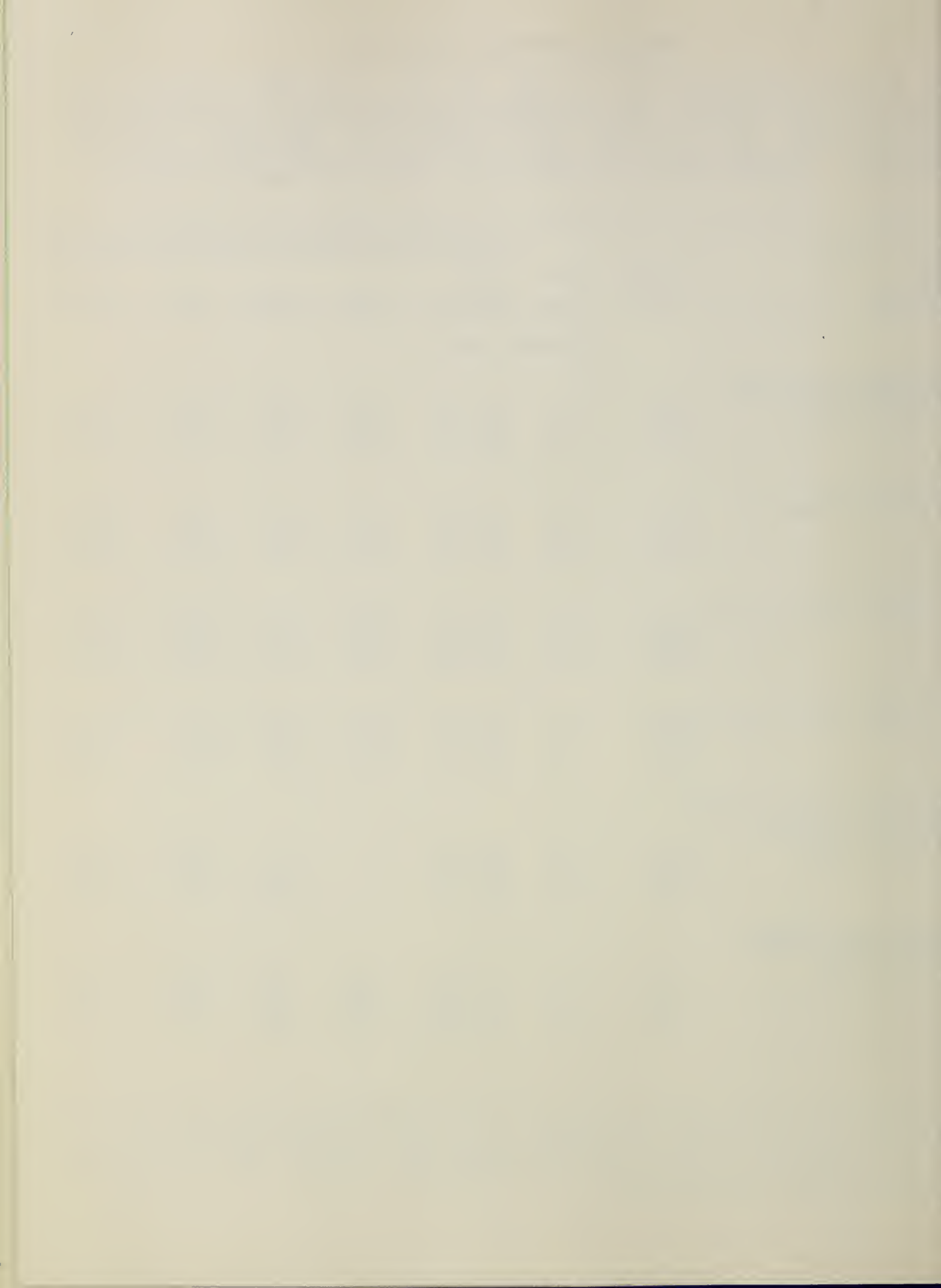
As stated above, all streams were reported to have above-normal run-off during February with the exception of Columbia at Birchbank and the Similkameen River. This is the result of above-normal precipitation previously mentioned. Much of the low-elevation snowpack is still on the ground with only that occurring at very low elevations running off. The forecasts of streamflows range from 12% above normal for the Kettle River near Laurier to a high of 64% above normal for the Yakima at Parker. Many of these forecasted flows, as mentioned previously, are for record amounts and most are for second and third highest of record. Numerical forecasts can be found elsewhere in this report.

STREAMFLOW FORECASTS - MARCH 1972

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. Streamflow figures for 1972 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1972	% 15-Yr. Avg.	Fore- cast Period	Seasonal Streamflow in Thousands of Acre-Feet			
				1971	1970	1969	15-Yr
							Average 1953-67
<u>COLUMBIA BASIN</u>							
<u>Columbia River System</u>							
Columbia River	53800	116	Apr-Sep	48592	34553	48001	46368
at Birchbank <u>1/</u>	44200	118	Apr-Jul	39462	27931	40567	37480
	32450	120	Apr-Jun	29759	20952	32193	27040
Columbia River							
at Grand Coulee <u>1/</u>	87400	126	Apr-Sep	75360	54617	74617	69458
	75400	128	Apr-Jul	64444	46563	65587	58899
	59200	129	Apr-Jun	51550	37574	54513	45889
Columbia River							
bl. Rock Island Dam <u>1/</u>	96350	126	Apr-Sep	84965	58544	79675	76241
	81800	126	Apr-Jul	73096	50236	70515	64777
	65500	130	Apr-Jun	58245	40675	58851	50387
Columbia River							
at The Dalles, OR <u>1/</u>	135500	129	Apr-Sep	123427	88146	112281	105176
	117100	130	Apr-Jul	107702	76054	100113	90050
	95580	132	Apr-Jun	88936	62847	85657	72410
<u>Pend Oreille River System</u>							
Pend Oreille River							
bl. Box Canyon	22450	140	Apr-Sep		14737	16166	16030
	20700	140	Apr-Jul		13676	15055	14788
	17850	140	Apr-Jun		11985	13033	12754
<u>Kettle River System</u>							
Kettle River							
nr. Laurier	2150	112	Apr-Sep	2110	1099	2239	1918
	2040	112	Apr-Jul	2065	1068	2188	1821
	1860	113	Apr-Jun	1814	1004	2048	1644

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. R. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.



Streamflow Forecasts - March 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	% 15-Yr. Avg.	Fore- cast Period	Seasonal Streamflow in Thousands of Acre-Feet			
				1971	1970	1969	15-Yr Average 1953-67
<u>Kettle River System (Cont.)</u>							
Colville River	190	124	Apr-Sep		94	270	153
at Kettle Falls	175	125	Apr-Jul		86	256	141
	165	126	Apr-Jun		80	240	131
<u>Spokane River System *</u>							
Spokane River							
at Post Falls ID <u>2/</u>	4300	137	Apr-Sep			3552	3151
	4200	137	Apr-Jul			3463	3055
	4000	137	Apr-Jun			3350	2913
<u>Okanogan River System**</u>							
Similkameen River							
nr. Nighthawk	2070	136	Apr-Sep	1924	850	1199	1525
	1950	138	Apr-Jul	1827	808	1150	1419
	1670	140	Apr-Jun	1552	739	1052	1197
Okanogan River							
nr. Tonasket	2455	141	Apr-Sep	2236	923	1448	1738
	2270	144	Apr-Jul	2080	864	1353	1578
	1920	146	Apr-Jun	1769	785	1231	1318
<u>Methow River System**</u>							
Methow River							
nr. Pateros	1480	140	Apr-Sep		622	1060	1054
	1380	141	Apr-Jul		587	1013	981
	1200	144	Apr-Jun		532	948	834
<u>Chelan River System</u>							
Chelan River							
at Chelan <u>3/</u>	1710	135	Apr-Sep	1559	905	1337	1266
	1540	138	Apr-Jul	1363	816	1230	1119
	1230	141	Apr-Jun	1009	683	1093	870
Stehekin River							
at Stehekin	1220	135	Apr-Sep		678	961	904
	1050	136	Apr-Jul		589	853	772
	820	140	Apr-Jun		478	748	586
Entiat							
nr. Ardenvoir	260	--	Apr-Sep		160	265	--
	240	--	Apr-Jul		148	249	--
	200	--	Apr-Jun		129	227	--

* Forecasts made by J. Alden Wilson, Soil Conservation Service, Boise, Idaho.

** These forecasts are based in part upon base flow data especially prepared and furnished for this purpose by the U. S. Geological Survey.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.3/ Observed flow corrected for storage in Lake Chelan.

Streamflow Forecasts - March 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	% 15-Yr. Avg.	Seasonal Streamflow in Thousands of Acre-Feet				
			Fore- cast Period	1971	1970	1969	15-Yr. Average 1953-67
<u>Wenatchee River System</u>							
Wenatchee River	1810	136	Apr-Sep		1019	1443	1333
at Plain	1660	138	Apr-Jul		941	1349	1204
	1350	142	Apr-Jun		804	1217	952
Wenatchee River							
at Peshastin	2590	143	Apr-Sep	2364	1416	1953	1814
	2360	143	Apr-Jul	2036	1318	1840	1651
	1880	143	Apr-Jun	1483	1132	1669	1316
Stemilt Basin							
nr. Wenatchee	157*		May-Sep			145*	
<u>Yakima River System</u>							
Yakima River							
nr. Martin <u>4/</u>	205	141	Apr-Sep	195	131	156	145
	192	143	Apr-Jul	182	123	144	134
	173	149	Apr-Jun	142	114	136	116
Yakima River							
at Cle Elum <u>5/</u>	1350	139	Apr-Sep		866	1051	968
	1260	142	Apr-Jul		803	977	885
	1100	144	Apr-Jun		723	912	762
Yakima River							
nr. Parker <u>6/</u>	2850	164	Apr-Sep		1491	1989	1738
	2800	163	Apr-Jul		1512	2005	1722
	2550	161	Apr-Jun		1461	1980	1583
Kachess River							
nr. Easton <u>7/</u>	185	144	Apr-Sep	173	115	139	128
	177	145	Apr-Jul	164	112	134	122
	158	148	Apr-Jun	131	104	128	107
Cle Elum River							
nr. Roslyn <u>8/</u>	650	134	Apr-Sep	626	435	496	485
	600	135	Apr-Jul	567	402	473	445
	520	139	Apr-Jun	433	350	440	373
Bumping River							
nr. Nile <u>9/</u>	220	147	Apr-Sep	187	129	150	150
	205	149	Apr-Jul	168	122	142	138
	170	149	Apr-Jun	118	107	133	114

* Thousands of Miners' inches.

4/ Observed flow corrected for storage in Lake Keechelus.5/ Observed flow corrected for storage in Keechelus, Kachess and Cle Elum Lakes and diversion by Kittitas Canal.6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation and Sunnyside Canals.7/ Observed flow corrected for storage in Lake Kachess.8/ Observed flow corrected for storage in Lake Cle Elum.9/ Observed flow corrected for storage in Bumping Lake.

Streamflow Forecasts - March 1972 (Cont.)

Basin, Stream and Station	Forecast Runoff 1972	%	15-Yr. Avg.	Fore- cast Period	Seasonal Streamflow in Thousands of Acre-Feet		
					1971	1970	1969
							15-Yr. Average 1953-67

Yakima River System (Cont.)

American River	190	147	Apr-Sep		128	138	129
nr. Nile	177	148	Apr-Jul		120	130	120
	147	148	Apr-Jun		106	120	99
Tieton River							
at Tieton Dam <u>10/</u>	350	139	Apr-Sep	323	244	273	251
	307	143	Apr-Jul	268	207	244	215
	250	145	Apr-Jun	197	172	220	172
Naches River							
nr. Naches <u>11/</u>	1330	148	Apr-Sep		841	994	899
	1230	150	Apr-Jul		779	926	819
	1060	152	Apr-Jun		694	857	698
Ahtanum Creeks							
nr. Tampico <u>12/</u>	64	130	Apr-Sep		43	57	49
	60	133	Apr-Jul		39	53	45
	55	138	Apr-Jun		35	49	40

Lower Columbia River System

Mill Creek							
nr. Walla Walla	40	138	Apr-Sep		27	32	29
	36	144	Apr-Jul		23	29	25
	34	148	Apr-Jun		21	27	23
Lewis River							
at Ariel <u>13/</u>	1950	144	Apr-Sep		914	1613	1358
	1770	148	Apr-Jul		798	1431	1197
	1570	148	Apr-Jun		723	1303	1059
Cowlitz blw.							
Mayfield Dam	3200	148	Apr-Sep		1615	2230	2160
	2840	149	Apr-Jul		1425	2002	1908
	2420	150	Apr-Jun		1245	1802	1612
Cowlitz River							
at Castle Rock <u>14/</u>	4100	145	Apr-Sep		2134	2965	2818
	3680	148	Apr-Jul		1873	2641	2487
	3030	143	Apr-Jun		1652	2359	2119

OLYMPIC PENINSULA

Dungeness River System

Dungeness River							
nr. Sequim	200	116	Apr-Sep		136	195	172
	165	117	Apr-Jul		115	167	141
	125	119	Apr-Jun		89	139	105

- 10/ Observed flow corrected for storage in Rimrock Lake.
- 11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals and City of Yakima.
- 12/ Observed flow of North and South Forks (combined).
- 13/ Observed flow corrected for storage in Lake Merwin, Yale and Swift Reservoirs.
- 14/ Observed flow corrected for storage in Mayfield Reservoir.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about March 1, 1972, as per cent of the same date in 1971 and 1970 and average of record.

Tributary Basin	No. of	Years	1972 Snow Water Expressed		
	Courses	of	as per cent of		
	Average	Record	1971	1970	1953-67
<u>UPPER COLUMBIA BASIN</u>					
Pend Oreille	13 - 15	8 - 35	119	150	141*
Kettle	12	6 - 32	104	141	126*
Colville	5	10 - 13	98	96	100*
Spokane	5 - 6	15 - 35	134	158	141*
Okanogan	28 - 30	5 - 34	138	183	163*
Methow	6 - 8	9 - 34	120	162	173*
Chelan	5	18	115	204	152*
Entiat	8	5 - 11	129	168	165*
Wenatchee	9 - 10	4 - 27	140	157	210*
Yakima	22	4 - 50	159	145	191*
Ahtanum	2	30	142	120	189*
<u>LOWER COLUMBIA</u>					
Mill Creek	3	7 - 22	234	215	192*
Klickitat	1	14	112	123	198*
White Salmon	2	28	112	200	186*
Lewis	16 - 17	9 - 14	112	297	185*
Cowlitz	10	8 - 20	125	233	194*
<u>PUGET SOUND</u>					
Nisqually	4	6 - 15	128	302	216*
White	2	20	122	190	172*
Green	5 - 9	10 - 25	132	239	163*
Cedar	6	11 - 13	278	307	204*
Snoqualmie	2 - 4	3	162	208	190*
Skykomish	2 - 3	4 - 27	119	169	178*
Skagit	9 - 11	14 - 24	137	280	201*
Nooksack	1 - 2	2 - 4	121	247	--
<u>OLYMPIC PENINSULA</u>					
Skokomish	3 - 4	8 - 14	103	210	154*
Elwha	1	12	129	208	136*
Dungeness	1	18	138	176	144*

* Records of less than 15 years used on computation of average

RESERVOIR STORAGE - 1000 Acre Feet

BASIN or STREAM	RESERVOIR	USABLE ^{1/} CAPACITY	Measured (March)			
			1972	1971	1970	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	248.0	154.2	148.1	149.4
Columbia	Franklin D. Roosevelt Lake	5232.0	2735.6	4666.2	3464.7	2985.2
Columbia	Banks Lake	761.8	714.9	712.2	605.4	511.7
Okanogan	Conconully Reservoir	13.0	9.6	5.8	7.4	6.1
Okanogan	Salmon Lake	10.5	8.6	2.1	7.6	8.5
Chelan	Lake Chelan	676.1	126.5	257.0	96.7	243.7
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	151.9	123.0	59.6	99.0
Kachess	Kachess Lake	239.0	179.0	201.1	169.6	178.5
Cle Elum	Lake Cle Elum	436.9	312.1	231.3	171.8	266.0
Bumping	Bumping Lake	33.7	9.2	5.2	7.2	11.0
Tieton	Rimrock Lake	198.0	139.6	122.9	89.0	124.1
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1202.9	680.1	912.7	725.1	851.6
Skagit	Diablo Reservoir	90.6	83.8	83.4	85.3	85.9
Skagit	Gorge Reservoir	9.8	7.3	8.3	8.3	--

^{1/} Based on Active Storage

* 15-year average 1953-67

SOIL MOISTURE - MARCH

Drainage Basin and Station	Number	Elev.	Profile Depth	(Inches) : Total : Capacity :	Soil Moisture Content (Inches) as of Mar. 1 1972 1971 1970		
<u>CRAB CREEK</u>							
Jack Woods	18B3m	2750	48	13.6	8.1	9.8	9.4
Krause	18B4m	2420	48	13.6	7.0	6.2	9.0
Sheffels	18B5m	2380	48	13.6	8.8	7.7	8.4
Sherman	18B7m	2440	48	13.6	7.4	7.8	8.9
Wheatridge	18B6m	2290	48	13.6	8.7	10.5	9.8
<u>OKANOGAN</u>							
Salmon Meadows	19A2M	4500	48	5.4	3.6	3.6	2.4
Trout Creek	3-M	3600	48	7.3	4.0*	3.2*	3.3*
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	Not Measured	5.0	6.0
Lake Cle Elum	21B14M	2200	48	12.8	Not Measured	9.2	9.2
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	10.8	10.1	10.5
Helmrs	17C2M	4400	48	12.0	11.6	10.7	10.9
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	10.0	10.1	7.1

* Feb 1 measurement

FALL SOIL MOISTURE

Drainage Basin and Station	Number	Elev.	Profile Depth	(Inches) :	Soil Moisture Content		
				Total :	(Inches) as of Oct. 1		
				Capacity :	1971	1970	1969
<u>CRAB CREEK</u>							
Jack Woods	18B3m	2750	48	13.6	5.3	7.0	7.5
Krause	18B4m	2420	48	13.6	5.0	4.4	5.9
Sheffels	18B5m	2380	48	13.6	5.3	4.4	4.5
Sherman	18B7m	2440	48	13.6	4.0	3.8	4.2
Wheatridge	18B6m	2290	48	13.6	5.5	7.8	5.4
<u>OKANOGAN</u>							
Salmon Meadows	19A2M	4500	48	5.4	2.7	1.7	2.7
Trout Creek	3-M	3600	48	7.3	3.3	3.4*	3.8*
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	2.1	2.4	--
Lake Cle Elum	21B14M	2200	48	12.8	7.1	7.6	--
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	6.2	5.9	6.1
Helmrs	17C2M	4400	48	12.0	8.2	7.3	7.1
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	6.5	5.1	9.8

* Nov 1 measurement

PRECIPITATION ^{1/}

Division Averages and Departures

Drainage Divisions	^{2/} 1971		Nov - 1971 - Feb - 1972 ^{2/}	
	Sep - Oct Average	Departure	Average	Departure
Columbia in Canada	4.45	+ 0.56	15.24	+ 4.05
Pend Oreille - Spokane	4.63	+ 0.48	18.48	+ 3.00
Northeastern Washington	3.16	+ 0.91	8.33	- 1.12
Southeastern Washington	3.73	+ 1.08	12.06	+ 1.72
Central Washington	4.15	- 0.29	34.07	+10.39
North Central Washington	1.99	+ 0.58	8.26	+ 2.72
Northwest Slope Cascades	11.60	- 0.07	55.49	+10.98
Southwest Slope Cascades	9.33	+ 1.61	45.41	+10.92

Northeastern Washington	- Lower Spokane, Colville, Sanpoil and lower Kettle drainages.
Southeastern Washington	- Touchet, Tucannon and Palouse drainages.
Central Washington	- Yakima, Wenatchee and Chelan drainages.
North Central Washington	- Methow and Okanogan drainages.
Northwest Slope Cascades	- Puget Sound drainages.
Southwest Slope Cascades	- Lower Columbia drainages.

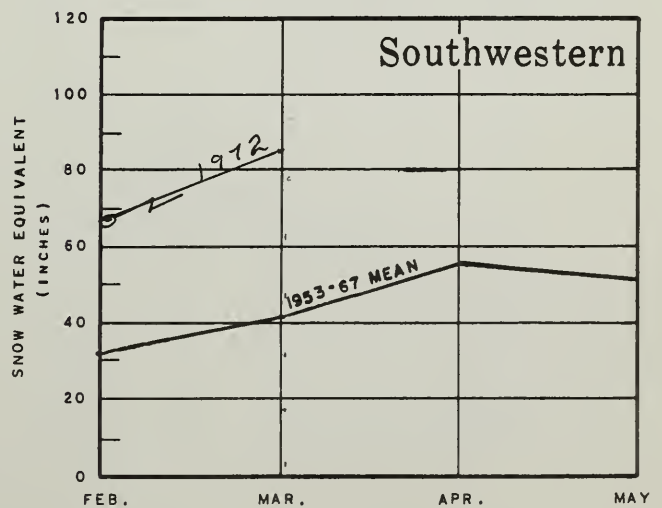
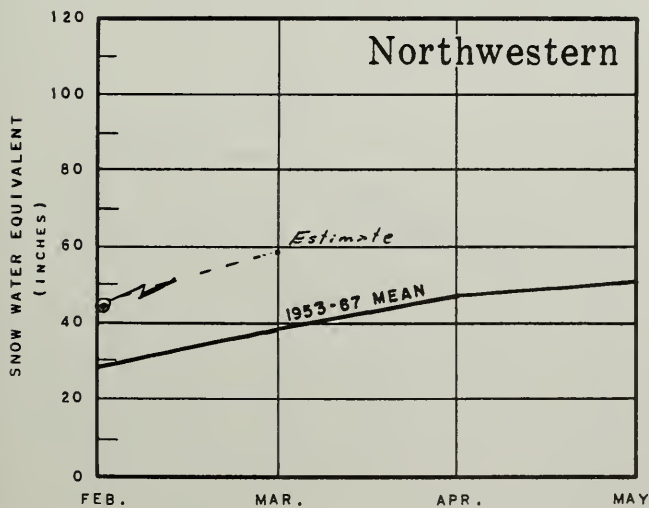
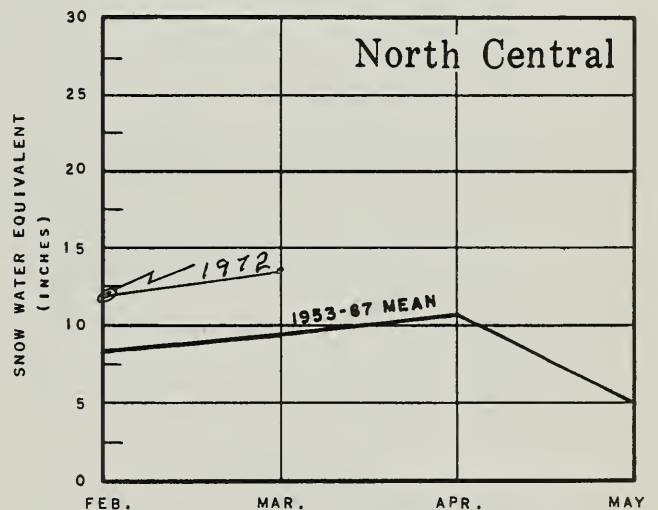
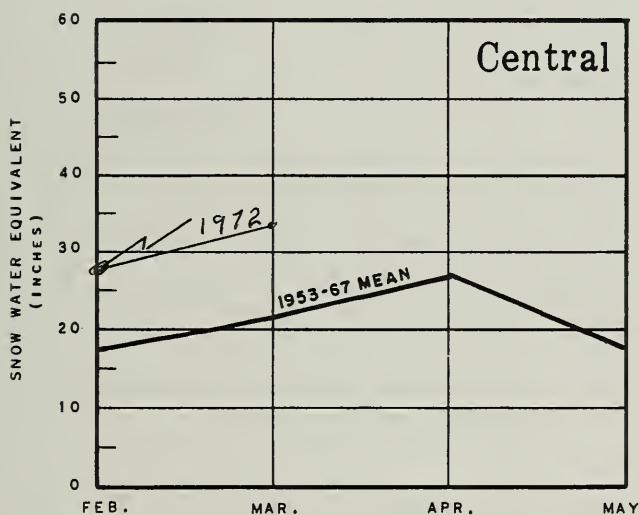
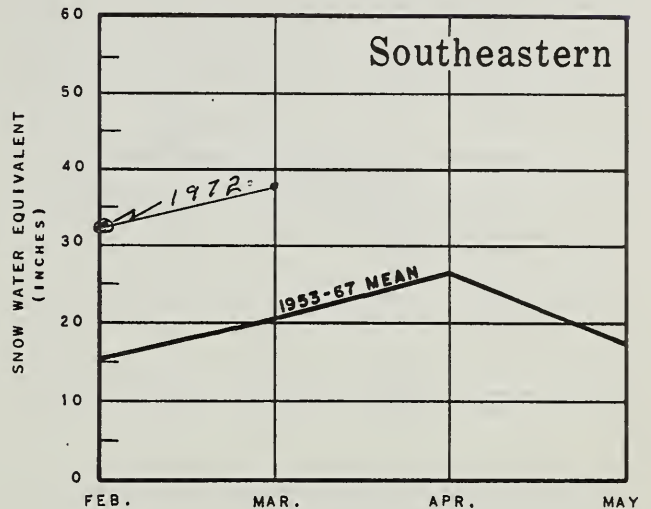
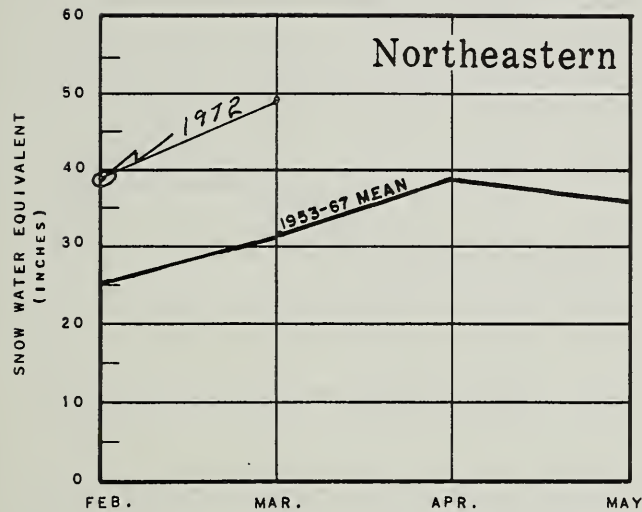
^{1/} - Preliminary analysis by National Weather Service from data furnished by Meteorological Services of Canada and National Weather Service.

^{2/} - Departure from 15-year (1953-67) drainage division average.

WASHINGTON SNOW COVER

1972

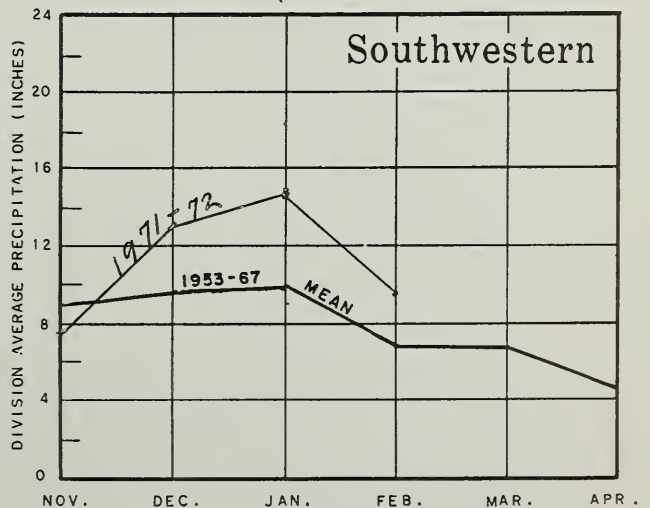
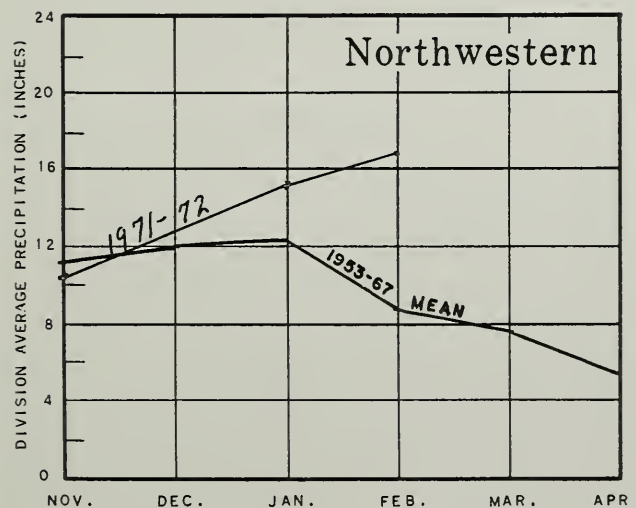
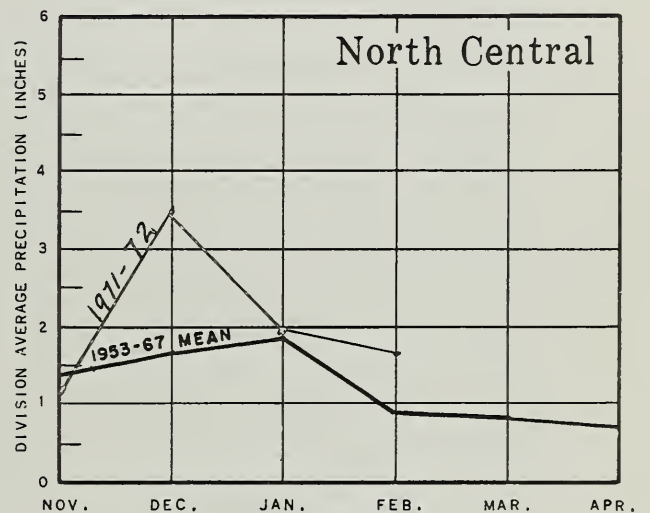
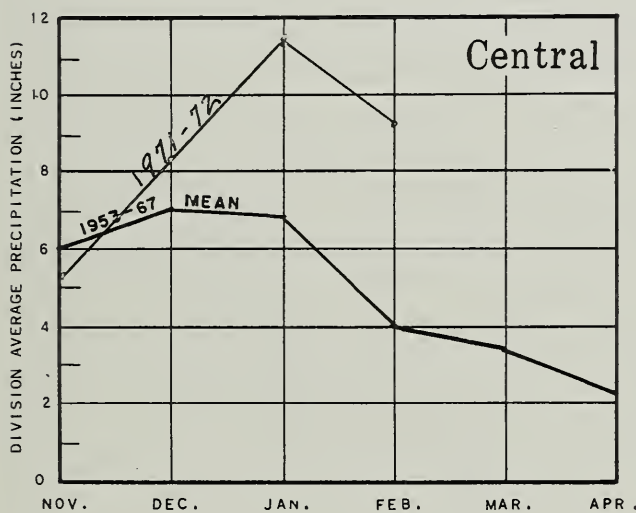
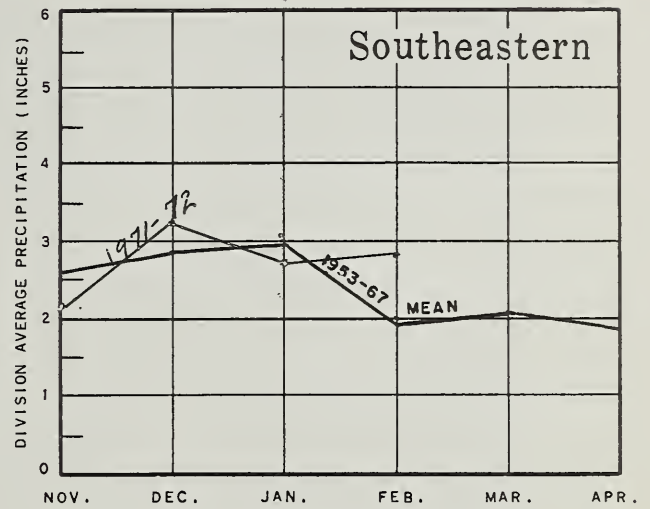
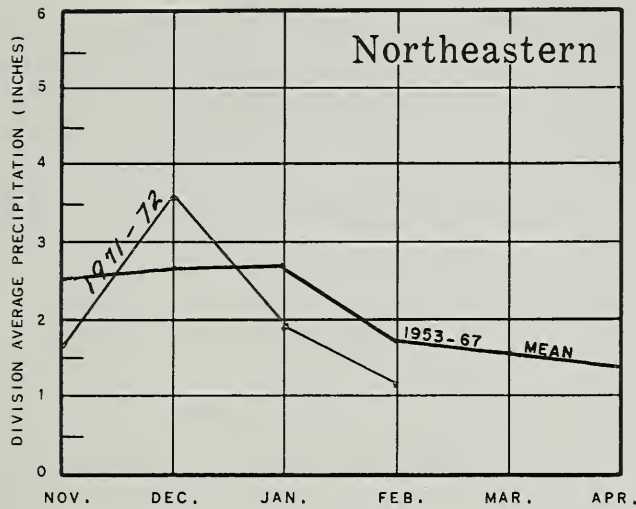
DRAINAGE AREAS



WASHINGTON VALLEY PRECIPITATION

1971-1972

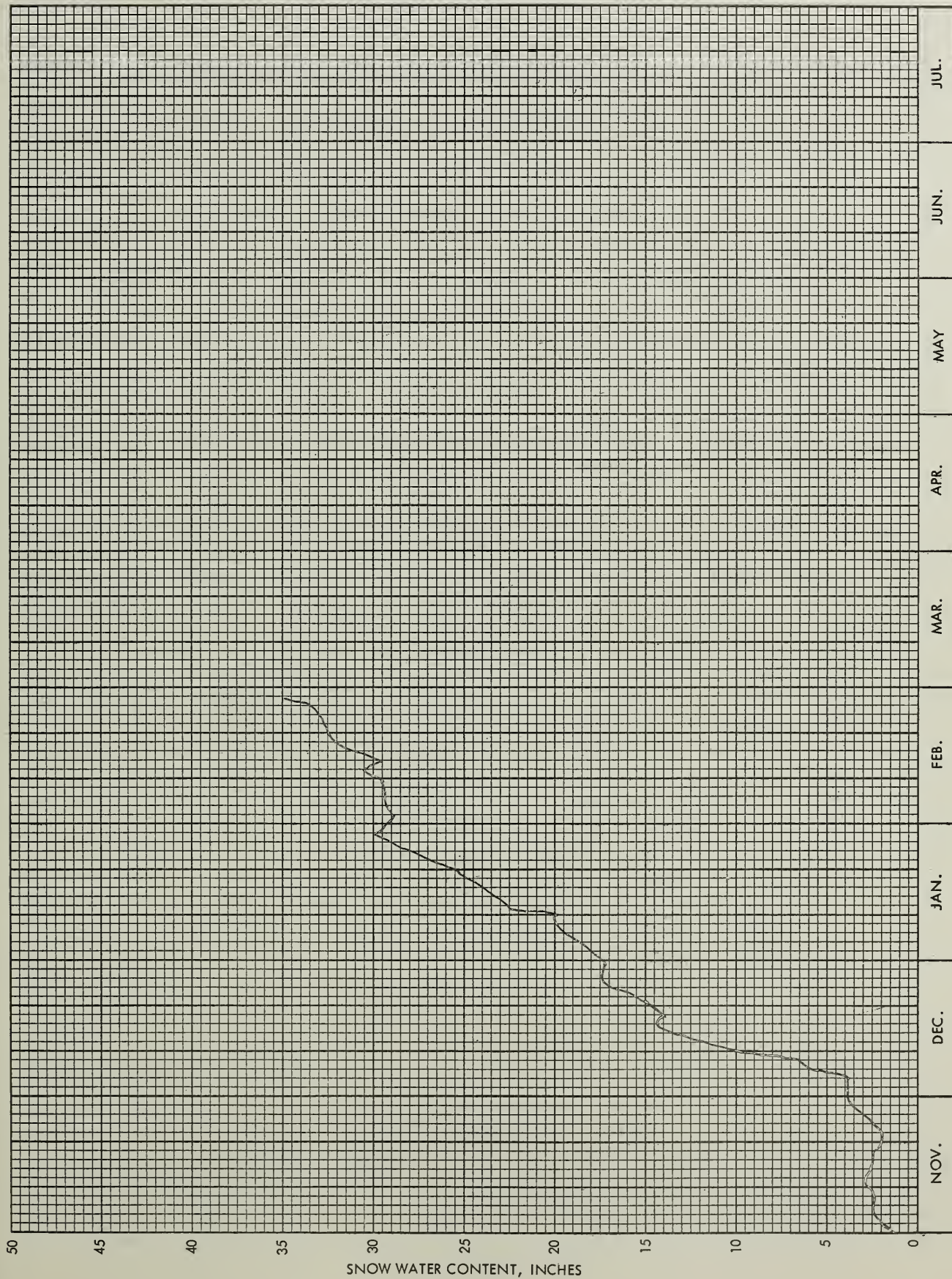
DRAINAGE AREAS



Berne-Mill Creek
SNOW PILLOW DATA

AS OF March 1, 1972

Sec. 13 T. 26N R. 14E No. w1B416P Drainage: Wenatchee R.
Lat. 47° 45' Long. 121° 42' Elev. 3240'



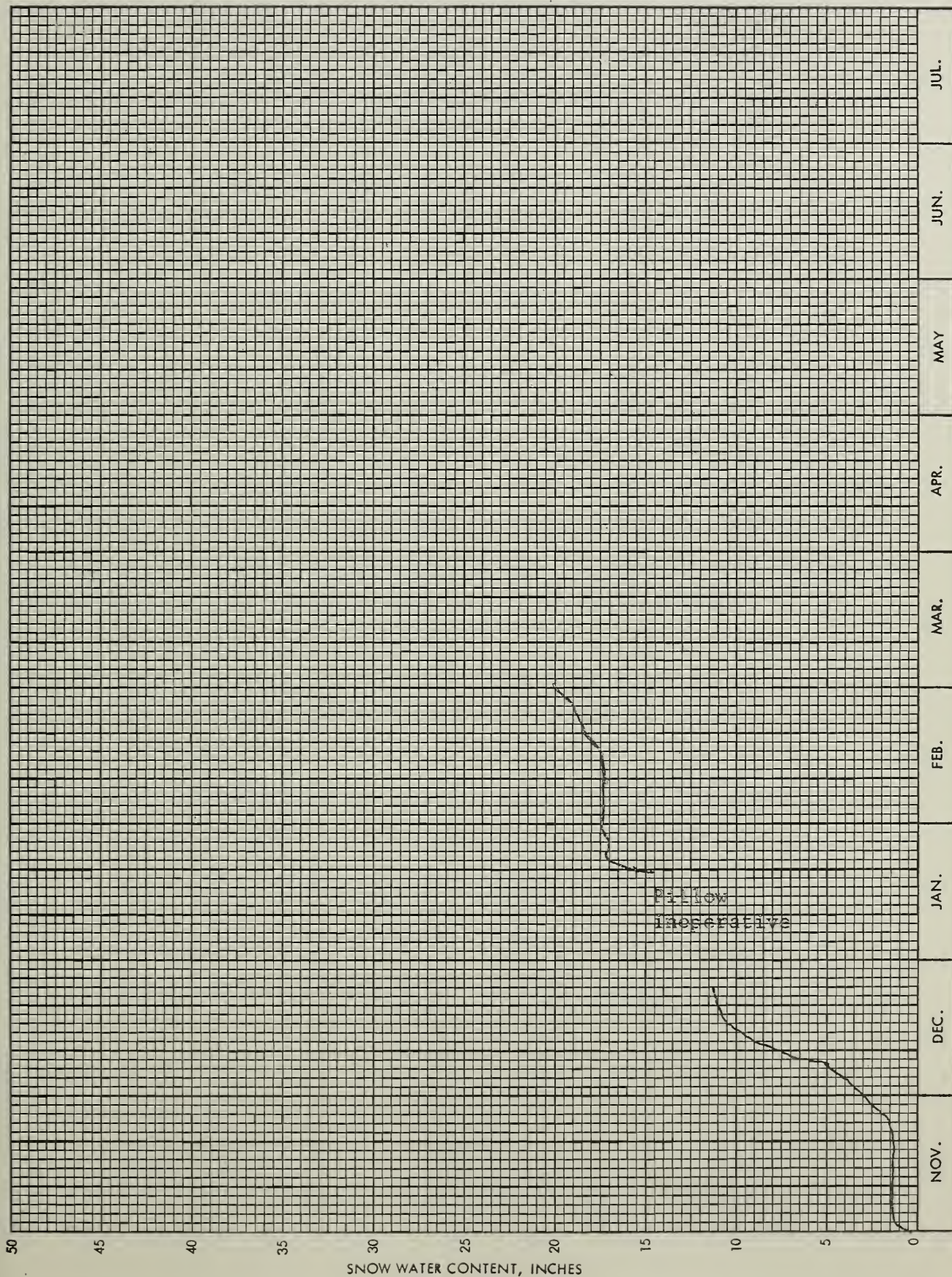
SNOW PILLOW DATA

Trough No. 2

1971-72

Sec. 10 T. 20N R. 20E No. 20B25SF Drainage: Wenatchee R.

Lat. 47° 14' Long. 120° 19' Elev. 5310



Pillow
insensitive

SNOW WATER CONTENT, INCHES

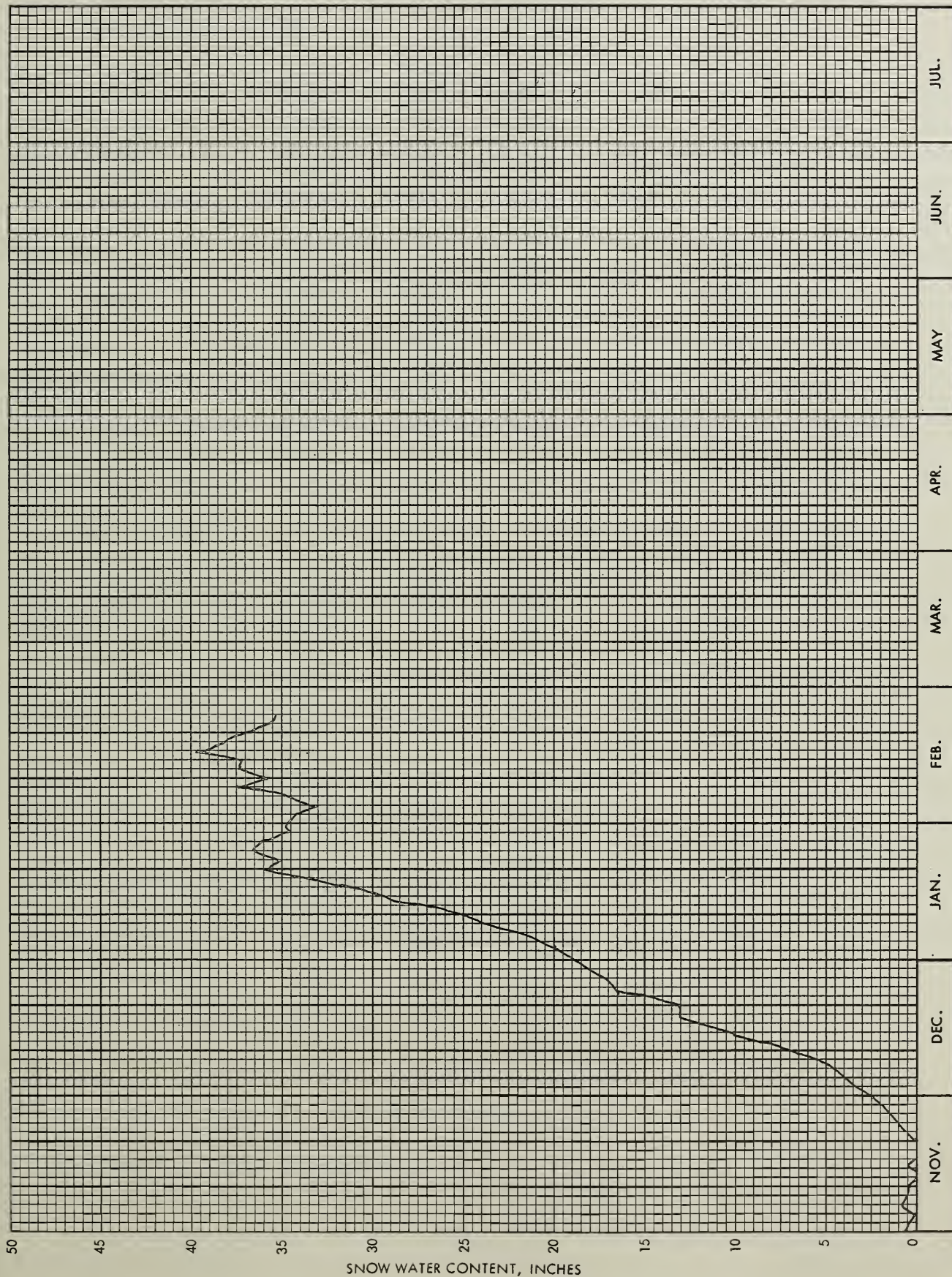
Cougar Mountain - FS

SNOW PILLOW DATA

AS OF March 1, 1972

Sec. 21 T. 21N R. 9E No. 21B42SP Drainage: Green River

Lat. 47° 17' Long. 121° 40' Elev. 3200'



APPENDIX 1
SNOW DATA FEBRUARY 1 to MARCH 1, 1972

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average <input checked="" type="checkbox"/>

U P P E R C O L U M B I A D R A I N A G E

PEND OREILLE RIVER

Benton Meadow	16A2	2344	2/29	13	4.3	7.1	5.8
Benton Spring	16A3	4900	3/1	59	22.0	16.3	18.2
Baree Creek	15B11	5500	2/29	158	64.5	48.0	43.5
Baree Midway	15B16	4600	2/29	134	53.9	38.8	33.8
Baree Trail	15B15	3800	2/29	43	17.4	13.0	8.2
Boyer Mountain	17A2	5250	2/29	64	24.0	27.6	23.4
Brush Creek	14A4	5000	2/29	50	16.8	11.4	11.7
#Chewelsh	17A4	4925	2/26	41	12.4	14.9	16.5
Heart Lake Trail	14C10	4800	2/29	101	39.2	28.4	20.2*
Hoodo Basin	15C10	4800	2/29	171	68.6	56.2	45.6
Hoodo Creek	15C1	6200	2/29	176	68.8	51.6	42.5
Lockout	15B2	5250	2/29	134	49.3	40.0	32.3
Mosquito Ridge	16A4A	5100	2/29	Pillow	40.0	41.1	33.8*
Nelson	Canada	3050	2/28	63	18.5	14.6	14.5**
Schweitzer Bowl	16A6	4500	3/1	88	37.0	31.5	--
Schweitzer Ridge	16A5	6100	3/1	123	49.7	43.3	--
Winchester Creek	17A3	2970	2/25	56	12.0	13.9	11.5*

KETTLE RIVER

Barnes Creek	Canada	5500	3/3	71	23.9	19.8	17.8**
Big White Mountain	Canada	5500	2/28	59	20.0	16.0	16.9**
Boulder Road	18A2	1450	2/10	20	4.6	7.3	4.3*
			2/24	21	5.7	7.0	3.5*
Butte Creek	18A3	4070	2/10	31	8.6	8.6	8.1*
			2/24	34	9.7	9.3	8.7*
Cabin Creek	18A8	3170	2/10	28	8.2	7.8	7.5*
			2/24	31	8.7	8.7	7.7*
Carmi	Canada	4100	2/28	34	9.0	6.8	6.0**
Farron	Canada	4000	2/29	42	13.2	13.7	12.3**
Goat Creek	18A4	3595	2/10	26	7.0	8.2	6.9*
			2/24	26	7.0	7.6	6.6*
Lower Trapping Cr.	Canada	3050	2/28	31	6.2	6.0	5.1**
#Monashee Pass	Canada	4500	3/3	54	17.4	12.9	12.6**
Old Glory Mountain	Canada	7000	2/26	89	32.2	27.8	24.3**
Snow Caps Creek	18A5	2150	2/10	23	5.2	6.8	4.6*
			2/24	22	5.5	7.0	4.2*
Snow Caps Trail	18A6	2720	2/10	25	6.5	7.2	6.1*
			2/24	25	7.0	8.1	6.1*

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average <input checked="" type="checkbox"/>

KETTLE RIVER (Cont.)

Summit Guard Station	18A7	4600	Not Measured			6.3	8.0*
						6.9	8.3*
Upper Trapping Cr.	Canada	5500	2/28	39	12.6	9.5	8.5**

COLVILLE RIVER

Baird	17A6	3215	2/26	30	8.6	5.5	7.0*
Carlson	18A9	2885	2/26	15	4.6	4.2	4.8*
Chewelah	17A4	4925	2/26	41	12.4	14.9	16.5*
Stranger Mtn.	17A5	4990	2/26	35	10.8	17.0	12.4*
Togo	18A10	3370	2/26	36	11.3	14.6	9.4*

SPOKANE RIVER

Above Burke	15B8	4100	2/29	95	29.2	28.6	--
Copper Ridge	16B2	4800	3/1	94	34.2	28.4	26.0
Forty-nine Meadows +	15B3	5000	Late Report			32.8	28.6*
Fourth of July Summit	16B3	3100	2/29	40	13.2	8.1	10.5*
Granite Peak +	15B13A	6000	Late Report			41.3	41.8*
#Lookout	15B2	5250	2/29	134	49.3	40.0	32.3
Lost Lake +	15B14A	6000	Late Report			56.4	53.6*
Lower Sands Creek	16B1	3400	3/1	72	21.1	19.5	17.8
Medicine Ridge +	15B4A	6150	Late Report			43.2	43.6*
#Mosquito Ridge +	16A4A	5110	3/8	Pillow	43.0	41.1	33.8
Outlaw Creek +	15B12A	3750	Late Report			16.9	13.7*
Roland Summit +	15B5A	5200	3/8	152	54.7	34.8	34.6*
Sherwin	16C1	3200	2/28	72	24.8	13.4	14.1*
Sunset +	15B9A	5600	3/8	146	52.6	--	29.9*

OKANOGAN RIVER

Aberdeen Lake	Canada	4300	3/1	33	8.6	4.4	5.9**
Blackwall Peak	Canada	6250	2/29	147	52.6	42.4	31.6**
Bouleau Creek	Canada	5000	2/28	45	14.3	13.0	10.3**
Bouleau Lake	Canada	4500	2/27	55	16.8	13.5	--
Brenda Mine	Canada	4800	2/28	63	19.5	14.1	--
Brookmere	Canada	4800	2/27	57	13.0	13.2	9.1**
Carrs Landing Lower	Canada	2250	2/27	21	4.8	1.0	1.5**
Carrs Landing Upper	Canada	5200	2/27	31	7.2	3.6	4.3**

+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

APPENDIX 3

SNOW

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average <input checked="" type="checkbox"/>
OKANOGAN RIVER (Cont.)							
Clark +	19A8a	7000	Not Measured			22.7	18.0*
Enderby	Canada	6250	2/28	118	46.5	37.0	32.4**
#Freezeout Meadows	20A2	5000	Not Measured			--	28.2
Hamilton Hill	Canada	4900	2/26	77	26.6	--	13.3**
#Harts Pass	20A5A	6500	Late Report			49.6	38.5
#Horseshoe Basin +	19A5a	7000	3/3	79	28.4	21.6	11.6*
Isintok Lake	Canada	5510	2/26	46	14.1	8.2	6.8**
Lost Horse Mtn.	Canada	6300	Late Report			9.6	7.7**
#Loup Loup	19A7	4650	2/24	39	12.0	12.0	8.9*
Lower Esperon Creek	Canada	4270	2/27	48	14.9	13.3	10.6**
McCulloch	Canada	4200	2/26	33	9.0	7.1	6.2**
Middle Esperon Creek	Canada	4580	2/27	56	16.8	17.9	13.6**
Missezula Mountain	Canada	5100	Late Report			11.2	8.8**
Mission Creek	Canada	6000	2/28	66	23.3	22.9	17.2**
Monashee Pass	Canada	4500	3/3	54	17.4	12.9	12.6**
Mount Kobau	Canada	5950	2/29	50	15.3	13.3	11.9**
Muckamuck +	19A9a	6390	Not Measured			19.1	--
Mutton Creek No. 1	19A1	5700	2/24	63	21.8	15.9	12.3
Mutton Creek No. 2	19A4	6000	2/24	59	20.1	16.6	12.7
New Copper Mountain	Canada	4300	2/25	40	12.5	--	5.5**
New Penticton Res.	Canada	5225	2/25	48	12.3	7.2	--
Nickel Plate Mtn.	Canada	6200	2/28	51	13.1	11.9	6.9**
Paysayten +	20A28a	4300	Not Measured			23.2	14.2*
Postill Lake	Canada	4500	2/29	33	9.9	8.2	7.4**
Rusty Creek	19A3	4000	2/24	35	10.2	7.5	7.0
Salmon Meadows	19A2	4500	2/24	45	13.4	11.2	9.7
Silver Star Mtn.	Canada	6050	2/28	88	32.6	29.2	23.4**
Starvation Mtn. +	19A10a	6750	Not Measured			20.5	17.7*
Summerland Reservoir	Canada	4200	2/27	54	15.0	10.8	8.4**
Touts Coulee	19A6	2845	2/28	22	6.1	5.2	3.7*
Trout Creek	Canada	4700	2/26	48	13.0	8.4	6.3**
Upper Esperon Creek	Canada	5290	2/27	60	20.1	21.9	17.1**
Vaseux Creek	Canada	4050	2/26	34	7.8	8.8	--
White Rocks Mtn.	Canada	6000	2/28	77	27.5	24.7	18.5**

METHOW RIVER

Billy Goat Pass +	20A10a	6409	Marker Down			49.2	25.8*
Dollar Watch +	20A29a	7000	2/1	75	24.8	25.9	18.4
			3/3	115	41.4	32.4	23.7*
Harts Pass	20A5A	6500	Late Report			49.6	38.5
Horseshoe Basin +	19A5a	7000	2/1	58	19.1	14.1	9.7*
			3/3	79	28.4	21.6	11.6*

+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

** Average for years of record

APPENDIX 4

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average ^{1/}

METHOW RIVER (Cont.)

Loup Loup	19A7	4650	2/25	39	12.0	12.0	8.9*
#Mutton Creek No. 1	19A1	5700	2/24	63	21.8	15.9	12.3
#Mutton Creek No. 2	19A4	6000	2/24	59	20.1	16.6	12.7
#Rusty Creek	19A3	4000	2/24	33	10.2	7.5	7.0
#Salmon Meadows	19A2	4500	2/24	45	13.4	11.2	9.7
#War Creek Pass	20A31a	6500	2/1	125	41.2	37.1	--
			3/3	145	52.2	60.0	--

CHELAN LAKE BASIN

Cloudy Pass +	20A22a	6500	2/1	122	40.3	31.4	29.4*
			Marker buried			48.8	34.9*
Greenwood Flat +	20A25a	3540	Marker buried			--	--
Little Meadows +	20A24a	5275	2/1	118	38.9	30.1	29.9*
			Marker buried			51.6	37.5*
Lyman Lake	20A23A	5900	Marker Down			72.4	50.3*
Park Creek Flat +	20A13a	2220	2/1	106	35.0	28.8	27.8*
			3/3	118	42.5	40.0	31.0*
Park Creek Ridge	20A12A	4600	2/1	185	61.0	38.7	35.3*
			3/3	194	69.8	54.8	41.7*
Petersons +	20A16a	3730	2/1	120	39.6	30.7	26.2*
			3/3	155	55.8	43.2	32.5*
Rainy Pass	20A9	4780	3/4	160	58.4	46.8	37.0
Safety Harbor	20A30A	6300	2/1	90	29.7	28.5	--
			Marker buried			39.2	27.2*
War Creek Pass +	20A31a	6500	2/1	125	41.2	37.1	--
			3/3	145	52.2	60.0	40.8*

ENTIAT RIVER

Brief	20B19	1600	2/23	33	13.2	10.0	6.3*
Entiat Meadows +	20A33a	4800	3/4	154	64.7	51.1	42.7*
Entiat River Trail +	20A34a	3150	3/4	73	30.7	24.2	20.4*
Fox Camp +	20A36a	6510	3/4	188	79.0	56.9	50.7*
Pope Ridge	20B20	4300	2/28	67	28.3	21.6	17.3*
Pugh Ridge +	20A32a	6400	3/4	125	56.7	39.2	31.0*
Shady Pass	20A37	5000	Not Measured			32.0	--
Snow Brushy +	20A35a	3850	3/4	117	49.1	46.4	35.9*
Tommy Creek +	20B21a	5300	3/4	104	43.7	34.6	25.9*

+ Snow water equivalent estimated from aerial stadia observation

* Adjusted 1953-67 average

Not located directly on this drainage

APPENDIX 5

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average ^{1/}
<u>WENATCHEE RIVER</u>							
Berne-Mill Creek	21B23	2925	2/14	102	16.3	33.7	24.0*
			2/28	105	43.5	34.4	23.9*
Berne-Mill Cr. New	21B41SP	3240	2/28	77	33.0	32.8	21.7*
Blewett Pass No. 2	20B2	4270	2/25	79	32.9	19.4	13.8
Chiwaukum G. S.	20B16	1810	2/14	53	19.4	15.5	10.5*
			2/28	55	21.4	16.1	10.5*
#Fish Lake	21B4	3371	2/29	127	55.2	46.4	31.7*
Lake Wenatchee	20B5	1970	2/14	73	23.3	19.3	13.0*
			2/28	71	26.8	18.8	13.4*
Leavenworth R. S.	20B17	1127	2/14	32	10.8	6.7	4.3*
			2/29	26	9.0	4.5	2.6*
#Lyman Lake	20A23A	5900	Marker Down			72.4	50.3*
Merritt	20B18	2140	2/14	73	27.4	19.2	14.6*
			2/28	77	30.6	19.1	13.7*
Stevens Pass	21B1	4070	2/14	163	64.0	58.7	40.3
			2/28	171	77.3	62.1	44.4
Stevens Pass Sand Sh.	21B43	3700	2/14	124	47.4	41.0	--
			2/28	126	55.0	43.3	--

SQUILCHUCK CREEK

Beehive Springs	20B3	4400	2/29	33	14.0	5.7	6.5*
Scout-A-Vista	20B4	3400	2/29	31	13.0	8.8	7.0*

STEMILT CREEK

Jump-Off	20B8	4450	2/28	40	15.8	7.0	6.8*
Stemilt Slide	20B6	5030	2/28	61	24.1	14.1	12.6*
Upper Wheeler	20B7	4400	2/28	43	21.0	9.1	8.5*

COLOCKUM CREEK

Colockum Cr. Upper	20B22	5300	2/25	37	24.0	11.0	--
Colockum Cr. Lower	20B23	4300	2/25	42	16.2	8.9	--

YAKIMA RIVER

#Ahtanum R. S.	21C11	3100	2/25	31	11.8	7.1	5.9*
Big Boulder Creek	21B9	3200	2/26	84	34.2	26.7	18.5*
#Blewett Pass No. 2	20B2	4270	2/23	79	32.9	19.4	13.8
Bumping Lake	21C8	3450	2/16	53	20.6	21.2	15.1*
			3/1	67	20.4	22.8	15.3

* Adjusted 1953-67 average

Not located directly on this drainage

^{1/} Average based on 1953-67 average.

APPENDIX 6

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average ^{1/}
<u>YAKIMA RIVER (Cont.)</u>							
Bumping Lake New	21C36	3400	2/16	65	26.2	25.6	17.9*
			3/1	75	26.9	26.4	18.0*
#Cayuse Pass	21C6	5300	3/4	280	112.2	102.7	71.6*
Colockum Pass	20B9	5370	2/25	62	21.6	17.4	14.9*
Cooke Creek	20B10	4123	2/25	40	14.1	7.5	5.6*
#Corral Pass	21C13	6000	3/4	174	61.8	45.8	33.2*
Fish Lake	21B4	3371	2/26	127	55.2	46.4	31.7*
Green Lake	21C10	6000	2/25	118	45.8	38.8	25.7*
Grouse Camp	20B11	5385	2/28	66	24.9	15.5	16.1*
High Creek	20B12	2930	2/28	38	13.6	8.4	5.1*
Lake Cle Elum	21B14M	2200	2/17	60	22.0	4.4	8.5*
			2/28	50	22.2	4.7	8.5*
Lemah Creek +	21B47a	3327	Late Report			49.4	--
Manashtash	20C1	3935	2/23	28	9.1	3.8	4.0*
Morse Lake	21C17	5400	Not Measured			55.6	47.0*
Nanum	21B39	2340	2/28	48	18.9	10.6	9.8*
#Olallie Meadows	21B2	3625	3/7	176	79.1	61.6	40.4
#Satus Pass	20D1	4030	2/28	35	15.8	14.1	8.0*
#Stampede Pass	21B10	3000	2/15	173	53.0	35.2	34.8
			2/28	157	49.8	36.3	38.4
Trail Creek	20B14	3360	2/25	25	10.1	0.0	--
Tunnel Avenue	21B8	2450	2/16	80	31.3	25.8	20.2*
			2/28	83	33.8	28.9	21.6
Van Epps Pass +	20B26a	5925	Late Report			63.2	--
Walters Flat	20B15	3360	2/28	35	13.7	8.6	6.6*
Waptus Lake +	21B49a	3024	Late Report			54.2	--
White Pass (E. Side)	21C28	4500	2/18	107	46.4	30.0	21.5*
			2/28	101	48.7	32.3	21.1*
White Pass (L. Lake)	21C27	4500	Not Measured			34.8	22.6*
			2/25	123	49.1	29.8	26.1*

AKTANUM CREEK

Ahtanum R. S.	21C11	3100	2/25	31	11.8	7.1	5.9*
#Green Lake	21C10	6000	2/25	118	45.8	38.8	25.7

LOWER COLUMBIA DRAINAGEASOTIN CREEK

Spruce Springs	17C4	5700	2/24	89	32.7	20.7	--
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+ Snow water equivalent estimated from aerial stadia observation

* Adjusted 1953-67 average

Not located directly on this drainage

^{1/} Average based on 1953-67 average.

SNOW

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average <input checked="" type="checkbox"/>
<u>MILL CREEK</u>							
Homestead	17C1	4030	2/29	34	15.5	5.0	7.4*
Martin Springs	17C2	4400	2/29	56	23.2	10.4	12.5*
Tollgate	18D3M	5070	2/28	85	38.2	22.8	21.0
<u>KLICKITAT RIVER</u>							
Satus Pass	20D1	4030	2/28	35	15.8	14.1	8.0*
<u>WHITE SALMON RIVER</u>							
Cultus Creek	21C12	4000	3/7	147	66.3	64.9	38.9*
#Surprise Lakes	21C13A	4250	3/7	177	85.0	69.3	42.0
<u>WIND RIVER</u>							
Old Man Pass	21D19	3100	3/7	71	31.0	32.9	15.8*
<u>LEWIS RIVER</u>							
Blue Lake +	21C22a	4800	3/7	264	118.8	90.4	70.4*
Bob's Trail	21C21	2200	3/7	67	28.8	22.7	12.4*
Calamity Ridge +	22D1a	2500	3/7	38	17.5	16.4	--
Council Pass +	21C18a	4200	3/7	155	71.3	54.9	34.8*
#Cultus Creek	21C12	4000	3/7	147	66.3	64.9	38.9*
Divide Meadow +	21C29a	5600	3/7	222	99.9	--	47.7*
Grand Meadow	21C25	3500	3/7	100	44.0	31.2	22.9*
Lone Pine Shelter	21C26	3800	3/7	131	60.4	61.1	31.4*
Marble Mountain +	22C5a	3200	3/7	105	52.5	57.4	28.5*
#Mosquito Meadows	21C19	4100	3/7	136	62.0	62.9	34.4*
New Muddy River	22C6	1400	3/7	34	16.1	14.7	9.6*
Old Man Pass	21D19	3100	3/7	71	31.0	32.9	15.8*
Plains of Abraham +	22C1a	4400	3/7	180	86.4	78.8	55.7*
Smith Creek Road	22C4	2100	3/7	61	29.1	27.2	13.9*
Spencer Meadow +	21C20a	3400	3/7	81	37.3	--	20.5*
Surprise Lakes	21C13A	4250	3/7	177	85.0	69.3	42.0
Table Mountain +	21C24a	4200	3/7	153	70.4	59.7	40.6*
Timbered Peak +	21D18a	3000	3/7	48	22.1	23.0	16.4*
<u>COWLITZ RIVER</u>							
Cayuse Pass	21C6	5300	3/4	280	112.2	102.7	71.6*
Mosquito Meadows	21C19	4100	3/7	136	62.0	62.9	34.4*
+ Snow water equivalent estimated from aerial stadia observation							
# Not located directly on this drainage							
* Adjusted 1953-67 average							

+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

APPENDIX 8

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	No.	Elevation				Last Year	Average <input checked="" type="checkbox"/>

COWLITZ RIVER (Cont.)

Ohanapecosh	21C32	2200	2/25	69	28.6	28.0	14.8*
Packwood Lake	21C31	2870	3/6	80	30.1	22.1	12.0*
Pigtail Peak	21C33	5900	2/17	230	96.8	68.3	53.9*
			2/25	224	94.3	69.7	52.7*
#Plains of Abraham +	22C1a	4400	3/7	180	86.4	78.8	55.7*
Potato Hill	21C14	4500	3/5	132	57.8	44.9	25.7
#White Pass (E. Side)	21C28	4500	2/18	107	46.4	30.0	21.5*
			2/28	101	48.7	32.3	21.1*
#White Pass (L. Lake)	32C27	4500	Not Measured		.	34.8	22.6*
			2/25	123	49.1	29.8	26.1*
Willame Creek	21C30	3250	3/5	122	50.0	42.4	27.0*

PUGET SOUND DRAINAGENISQUALLY RIVER

Ghost Forest	21C4	4550	3/1	187	79.5	56.0	38.8*
Longmire	21C3	2760	3/1	61	25.2	21.2	8.4*
New Paradise Park	21C35	5500	3/1	247	105.0	82.0	57.9*
Stem Glade	21C1	5050	3/1	244	105.9	85.3	59.4*

WHITE RIVER

#Cayuse Pass	21C6	5300	3/4	280	112.2	102.7	71.6*
Corral Pass	21C13	6000	3/4	174	61.8	45.8	33.2*
#Morse Lake	21C17	5400	Not Measured			55.6	47.0*

GREEN RIVER

Airstrip	21B24	1800	2/26	22	9.0	5.0	--
Charley Creek	21B25	1200	2/26	0	0.0	4.0	--
Cougar Mtn. S. P.	21B42SP	3200	2/25	79	35.2	27.0	--
Grass Mtn. No. 2	21B27	2900	2/26	86	36.1	34.7	18.1*
Grass Mtn. No. 3	21B28	2100	2/26	41	15.2	11.5	--
Lester Creek	21B29	3100	2/26	98	37.5	29.4	20.7*
Lynn Lake	21B50	4000	2/26	99	47.6	33.8	--
Sawmill Ridge	21B29	4700	2/26	141	59.5	49.0	36.5*

Not located directly on this drainage

* Adjusted 1953-67 average

+ Snow water equivalent estimated from aerial stadia observation

☒ Average based on 1953-67 average.

APPENDIX 9

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	NO.	Elevation				Last Year	Average ✓
<u>GREEN RIVER (Cont.)</u>							
Snowshoe Butte SP	21B43SP	5000	Late Report			64.0	--
Stampede Pass	21B10	3000	2/15	173	53.0	35.2	34.8
			2/28	157	49.8	36.3	38.4
Twin Camp	21B30	4100	2/26	89	36.2	30.2	24.9*
<u>CEDAR RIVER</u>							
City Cabin	21B3	2390	2/25	75	30.2	23.9	14.8*
Mt. Gardner	21B21	3300	2/25	74	31.5	23.6	15.4*
Mt. Lindsay	21B16	2500	2/25	69	26.4	22.0	12.9*
Mt. Washington New	21B50	3000	2/29	47	21.0	--	--
Rex River	21B17	2400	2/25	74	29.1	2.8	12.1*
S. F. Cedar	21B6	3000	2/25	89	36.1	28.7	19.2*
Tinkham Creek	21B20	3400	2/25	96	38.1	31.3	20.6*
<u>SNOQUALMIE RIVER</u>							
Alpine Meadow	21B48	3500	2/28	148	71.3	49.6	--
#Lake Elizabeth	21B19	2900	2/26	164	60.6	57.6	33.1*
Olallie Meadows	21B2	3625	3/7	176	79.1	61.6	40.4
S. F. Tolt	21B18	1900	2/28	17	6.8	2.5	--
<u>SKITOMISH RIVER</u>							
Lake Elizabeth	21B19	2900	2/26	164	60.6	57.6	33.1*
#Stevens Pass	21B1	4070	2/14	163	64.0	58.7	40.3
			2/28	171	77.3	62.1	44.4
#Stevens Pass S. Shed	21B45	3700	2/14	124	47.4	41.0	--
			2/28	126	55.0	43.3	--
<u>SKAGIT RIVER</u>							
Beaver Creek Trail	21A4	2200	Not Measured			23.4	14.0*
Beaver Pass	21A1	3680	3/7	128	48.8	37.1	29.3*
Brown Top Ridge +	21A28a	6000	3/7	241	93.6	64.0	--
#Cloudy Pass +	20A22a	6500	Marker buried			48.8	34.9*
Devils Park	20A4	5900	Not Measured			45.5	39.1
Freezeout Cr. Trail	20A1	3500	3/7	68	24.2	19.8	12.6
Freezeout Meadows New		5000	3/7	222	77.2	--	--
Granite Creek	21A29	3500	3/4	92	32.4	18.2	--
#Harts Pass	20A5A	6500	Late Report			49.6	38.5
Klesilkwa	Canada	3700	2/29	80	29.9	18.6	12.6**

* Adjusted 1953-67 average

Not located directly on this drainage

+ Snow water equivalent estimated from aerial stadia observation

APPENDIX 10

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average $\sqrt{}$

SKAGIT RIVER (Cont.)

Lake Hozomeen	21A2	2600	3/7	46	15.5	17.5	9.0*
#Lyman Lake	20A23A	5900	Marker down			72.4	50.3*
Meadow Cabins	20A8	1900	3/4	53	17.1	10.4	7.2*
New Tashme	Canada	2500	2/29	70	22.6	15.1	11.0**
New Lake Hozomeen	21A30	2600	3/7	58	20.5	21.2	--
#Rainy Pass	20A9	4780	3/4	160	58.4	46.8	37.0
Thunder Basin	20A7	4200	3/4	98	33.6	24.2	20.5*

BAKER RIVER

Baker Pass	21A27a	4900	Not Measured			--	--
Dock Butte +	21A11A	3800	3/4	221	99.4	100.8	65.3*
Easy Pass	21A7A	5200	3/4	255	114.7	86.4	82.1*
Jasper Pass	21A6A	5400	3/4	279	125.5	114.2	87.3*
Marten Lake	21A9A	3600	3/4	254	114.3	92.2	73.3*
Mount Blum +	21A18a	5800	3/4	180	81.0	68.6	62.8*
#Panorama New	21A26	4300	2/15	196	77.5	--	--
			3/1	211	95.3	78.7	--
Rocky Creek	21A12A	2100	3/4	118	53.1	57.1	23.3*
Schreibers Meadow	21A10A	3400	3/4	176	79.2	80.6	58.1*
S. F. Thunder Creek	21A14A	2200	3/4	94	42.3	22.1	4.5*
Watson Lakes	21A8A	4500	3/4	216	97.2	88.3	61.3*

NOOKSACK RIVER

Bald Mountain +	21A19a	4400	Marker buried			60.8	--
Canyon +	21A20a	5100	Marker buried			75.2	--
Glacier Creek	21A23	3700	3/2	100	36.9	--	--
Panorama New	21A26	4300	2/15	196	77.5	--	--
			3/1	211	95.3	78.7	--
Twin Lakes +	21A21a	5200	Marker buried			90.0	--

OLYMPIC PENINSULADUNGENESS RIVER

Deer Park	23B4	5200	2/29	83	29.9	21.6	20.8
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MORSE CREEK

Cox Valley	23B14	4500	2/25	139	55.0	42.6	--
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+ Snow water equivalent estimated from aerial stadia observation

Not located directly on this drainage

* Adjusted 1953-67 average

 $\sqrt{}$ Average based on 1953-67 average.

APPENDIX 11

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	No.	Elevation				Last Year	Average ✓

ELWHA RIVER

Hurricane	23B3	4500	2/25	83	29.7	23.0	21.8*
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SKOKOMISH RIVER

Black & White	23B7	4200	3/3	130	51.2	53.6	32.3*
Black & White Lakes	23B6	4700	3/3	179	73.4	68.2	49.4*
Four Streams	23B10	3000	3/3	92	38.9	44.1	--
Home Sweet Home	23B5	5200	3/3	225	99.7	82.4	64.2*
Sundown Pass	23B8	3900	Not Measured			75.2	45.4*

* Adjusted 1953-67 average

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests and Water Resources,
Water Resources Service, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
NOAA, National Weather Service
U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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